claims. In view of the amendments to Claim 1, Applicants respectfully request that the rejection be withdrawn.

Claims 1,2, 7 and 8 were rejected under 35 USC §102(b) as being anticipated by WO EP 0 092 262 A1 ('262), and, in particular, Figures 1 and 2. This rejection is respectfully traversed. For a prior art reference to anticipate a set of claims, each and every limitation of the claims must be disclosed in that reference. *Glaxo v. Novopharm*, 34 USPQ2d 1565 (Fed. Cir. 1995). The '262 reference is not directed toward the shape of the downcomers, the description is silent as to the dimensions and it does not disclose the quantitative shape of the downcomers. In the specification of the '262 reference, the downcomers are described as having "inclined side walls" and as having "a configuration resembling a frustum in cross-section" (page 5, first paragraph). However, there is no mention of specific dimensions. Without specific dimensions, one skilled in the art would assume that a typical downcomer could be used to practice the invention. As described in the instant application on page 1, lines 21-25, the typical downcomer has a ratio between the lower end and the upper end of around 50%, which is significantly lower than the claimed "less than 40%". This typical ratio is illustrated in the enclosed excerpt from the Kister textbook "Distillation Operation" on pages 173-175. Therefore, the '262 does not disclose a ratio between the lower and upper ends of the downcomer of less than 40% and therefore does not anticipate the instant claims. In view of these remarks, Applicants respectfully request that the rejection be withdrawn.

Claims 3 - 5 were rejected under 35 USC §103(a) as being unpatentable over the '262 reference. This rejection is respectfully traversed. For a reference to render a claim obvious, it must teach or suggest the elements of the claim. As discussed above, the '262 reference does not disclose any specific ratio between the lower and upper ends of the downcomers. In particular, the figures of the references cannot be deemed to disclose a ratio of 33%, as there is no indication in the specification that such figures are drawn to scale. As explained in the MPEP §2125, the "proportions of features in a drawing are not evidence of actual proportions when drawings are not to scale." However, "the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art." As discussed above, one of ordinary skill in the art would assume a typical ratio of around 50%. As discussed in the specification of the instant application, the problem to be solved with the instant invention is downcomer backup and choking limitations. It would seem to be counter-intuitive to solve this problem by reducing the volume of the downcomer by further sloping of the walls, therefore, Applicants believe that such a solution is not taught nor suggested in the '262 reference and would not be an obvious

modification to one skilled in the art seeking to reduce downcomer choking. In view of these remarks, Applicants respectfully request that the rejection be withdrawn.

Claim 6 was rejected under 35 USC §103(a) as being unpatentable over either the '621 reference or the '262 reference and further in view of Jenkins US 4,496,430 ('430). This rejection is respectfully traversed. For a reference to render a claim obvious, it must teach or suggest the elements of the claim. As explained above, neither the '621 nor the '262 reference teach or suggest the elements of Claim 1 from which all other claims depend. Therefore, in view of the above remarks, Applicants respectfully request that the rejection be withdrawn.

Claims 9 and 10 was rejected under 35 USC §103(a) as being unpatentable over either the '621 reference or the '262 reference and further in view of Sampath et al US 5,230,839 ('839) or Yu et al US 6,299,146 B1 ('146). This rejection is respectfully traversed. For a reference to render a claim obvious, it must teach or suggest the elements of the claim. As explained above, neither the '621 nor the '262 reference teach or suggest the elements of Claim 1 from which all other claims depend. Therefore, in view of the above remarks, Applicants respectfully request that the rejection be withdrawn.

In view of the above amendments and remarks, Applicants respectfully request that the rejections be withdrawn. Applicants believe the instant application to be in condition for allowance and respectfully request that such action be taken.

Respectfully submitted,

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MARKED UP VERSION OF AMENDMENTS

IN THE ABSTRACT

Gas-liquid contacting tray [consisting of] having a bubble area and one or more rectangular downcomers which are longer in length than in width, which downcomers [consist of] have two sloped downcomer walls along their length, a downcomer opening at tray level and one or more downward directed liquid discharge openings at the lower end, which downcomers are so positioned on the tray that bubble area is present at both of the longer sides, wherein the cross-sectional area at the lower end of the downcomer is less than 40% of the cross-sectional area of the upper end of the downcomer at tray level.

IN THE CLAIMS

1. A gas-liquid contacting tray comprising:

a bubble area; and,

one or more rectangular downcomers sharing at least [one boundary] two boundaries with the bubble area, each having a length and a width wherein the length is longer than the width, and an upper and lower end, comprising:

two sloped downcomer walls along the length;

a downcomer opening at tray level; and,

one or more downward directed liquid discharge openings at its lower end;

wherein the downcomers are so positioned on the tray that the bubble area is present along the length, wherein the cross-sectional area at the lower end of the downcomer is less than about 40% of the cross-sectional area of the upper end of the downcomer at tray level.